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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/603,154 | 06/23/2000 | Balachander Krishnamurthy | 1999-0507 | 2026 |

7590 10/08/2003

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EXAMINER

FLYNN, KIMBERLY D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2153

DATE MAILED: 10/08/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/603,154

Applicant(s)

KRISHNAMURTHY ET AL.

Examiner

Marlon Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: Fig. 5; network prefix/netmask entry format 250 (it appears that page 8, lines 8-10 refer to it). A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1, 5, 7, 13, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanehara (6,611,873).

In considering claim 1,

Kanehara discloses a method of clustering a plurality of client IP addresses within a distributed information network, the method comprising the steps of:

generating a unified prefix/netmask table from a plurality of network routing table prefix/netmask entries (see Fig. 3, Address Conversion Table 207; col. 1, line 54 to col. 2, line 3);

comparing each of the plurality of client IP addresses with the unified prefix/netmask table to determine a common prefix between each of the plurality of client IP addresses and at least one of the entries in the unified prefix/netmask table (see col. 3, lines 25-35); and

grouping client IP addresses which share a common prefix into a network client cluster (plurality of groups) (see col. 1, line 54 to col. 2, line 3).

In considering claim 13,

Kanehara discloses a method for clustering clients, the method comprising:

creating a unified table of routing address information (see Fig. 3, Address Conversion Table 207; col. 1, line 54 to col. 2, line 3);

comparing one or more client IP addresses with the unified routing table to determine which client IP addresses belong to a common network (see col. 3, lines 25-35); and

clustering together the client IP addresses which belong to the common network

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into client clusters (plurality of groups) (see col. 1, line 54 to col. 2, line 3).

In considering claims 5 and 19,

Kanehara discloses a method further comprising:

placing one or more servers in front of a network client cluster, wherein the servers are at least one of proxy servers, cache servers, content distribution servers and mirror servers (content distribution servers) (see col. 3, lines 25-35; col. 5, lines 8-34).

In considering claim 7,

Kanehara discloses a method wherein the distributed information network is the World Wide Web (see col. 3, lines 17-21).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-4, 6, 8-12, 14-18, and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanehara.

In considering claim 8,

Kanehara discloses a method for guiding placement of servers within a distributed information network using at least one network server log and at least one network routing table from the distributed information network, the method comprising:

extracting a plurality of prefix/netmask entries (see col. 1, line 54 to col. 2, line

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3);

generating a unified prefix/netmask table from the plurality of extracted prefix/netmask entries (see Fig. 3, Address Conversion Table 207; col. 1, line 54 to col. 2, line 3);

comparing each of the plurality of client IP addresses with entries in the unified/prefix netmask table to determine a common longest matching prefix between each of the plurality of client IP addresses and the entries in the unified/prefix netmask table (see col. 3, lines 25-35); and

grouping all of the client IP addresses which share the common longest matching prefix into at least one client cluster (plurality of groups) (see col. 1, line 54 to col. 2, line 3).

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose extracting the entries from a plurality of network routing tables. Nonetheless, the extraction of netmask entities from a plurality of network routing tables is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the extraction of IP address-related entries from network routing tables is commonly used for determining network IDs, host IDs, and subnets. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by extracting the prefix/netmask entries from a plurality of network routing tables in order to provide commonly available network tools that contain a plurality of addressing information.

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose a method wherein the client IP addresses are extracted from a network log.

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Nonetheless, the extraction of IP addresses from a network log is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the extraction of IP addresses is typically done using a network log. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by using a method wherein the client IP addresses are extracted from a network log in order to provide a commonly available network entity that contain a plurality of addressing information.

In considering claim 20,

Kanehara discloses a computer-readable medium storing executable instructions which cause a computer to perform the steps of:

creating a unified routing table from a plurality of routing table entries see Fig. 3,

Address Conversion Table 207; col. 1, line 54 to col. 2, line 3);

prefix matching a plurality of client IP addresses with the entries in the unified routing table (see col. 3, lines 25-35); and

clustering client IP addresses which share common prefixes from the unified routing table into client clusters (see col. 1, line 54 to col. 2, line 3).

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose extracting the entries from a plurality of network routing tables.

Nonetheless, the extraction of netmask entities from a plurality of network routing tables is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the extraction of IP address-related entries from network routing tables is commonly used for determining network IDs, host IDs, and subnets. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by extracting the

prefix/netmask entries from a plurality of network routing tables in order to provide commonly available network tools that contain a plurality of addressing information.

Although Kanehara shows substantial features of the claimed invention, he fails to disclose each client cluster being serviced by at least one proxy server. Nonetheless, the use of assigning a proxy server to a cluster of clients is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as corporations typically use proxy servers to protect their users/clients from outside threats. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by assigning at least one proxy server to a client cluster in order to protect the identity of the clients from sources outside the cluster. In considering claims 2, 9, 14, 16, and 21,

Kanehara discloses a method and computer-readable medium wherein the step of generating a unified prefix/netmask table from a plurality of network routing table prefix/netmask entries includes the steps of:

extracting the prefix/netmask entries (see col. 1, line 54 to col. 2, line 3); and
converting the prefix/netmask entries into a standardized format (see Fig. 3, "Converted IP address"; col. 4, lines 6-13)

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose extracting the entries from a plurality of network routing tables. Nonetheless, the extraction of netmask entities from a plurality of network routing tables is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the extraction of IP address-related entries from network routing tables is commonly used for determining network IDs, host IDs, and subnets. It would have been

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obvious for a person having ordinary skills in the art to modify Kanehara by extracting the prefix/netmask entries from a plurality of network routing tables in order to provide commonly available network tools that contain a plurality of addressing information.

In considering claim 3,

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose a method wherein the client IP addresses are extracted from a network log. Nonetheless, the extraction of IP addresses from a network log is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the extraction of IP addresses is typically done using a network log. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by using a method wherein the client IP addresses are extracted from a network log in order to provide a commonly available network entity that contain a plurality of addressing information.

In considering claim 4,

Although Kanehara shows substantial features of the claimed invention, he fails to disclose identifying existing spiders and/or proxies within the network log. Nonetheless, identifying existing proxies and spiders within a network log is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by identifying existing spiders and/or proxies within the network log in order to prowl the web and locate new IP addresses, using spiders, and determine IP addresses which may be protected by a proxy.

In considering claims 6, 15, and 23,

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Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose a method and computer-readable medium wherein the common prefix is the common longest matching prefix from the unified prefix/netmask table. Nonetheless, the of a common longest matching prefix is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the common longest matching prefix is the most widely used prefix matching scheme for routing purposes. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by using a method wherein the common prefix is the common longest matching prefix from the unified prefix/netmask table in order to provide a commonly available network measurement scheme for interpreting Ip address-related information.

In considering claims 17, and 22,

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose a method wherein the client IP addresses are extracted from a server log. Nonetheless, the extraction of IP addresses from a server log is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara, as the extraction of IP addresses is typically done using a proxy server log. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by using a method wherein the client IP addresses are extracted from a server log in order to provide a commonly available network entity that contain a plurality of addressing information.

In considering claims 10 and 24,

Kanehara discloses a method and computer-readable medium wherein the servers are selected from the group consisting of proxy servers, cache servers, content distribution servers and mirror servers (see col. 3, lines 25-35).

In considering claims 12 and 18,

Kanehara discloses a method further comprising:

assigning servers to client clusters based on the number of requests (service requests) issued by those clients (see col. 5, lines 24-34).

Although Kanehara shows substantial features of the claimed invention, he fails to specifically disclose assigning servers to client clusters based on the number of clients comprising each client cluster. Nonetheless, the assigning of servers to client clusters based on the number of clients comprising each client cluster is very well known in the art and would have been an obvious modification to the method disclosed by Kanehara.. It would have been obvious for a person having ordinary skills in the art to modify Kanehara by assigning servers to client clusters based on the number of clients comprising each client cluster in order to control the request load being placed on the server.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (Gervais et al. 5856974, Alkhatib et al. 6532217, Fairchild et al. 6343320, Aiken Jr. et al. 6425014, Chung et al. 6470389, Cucchiara 6546424, Beck et al. 6549538).

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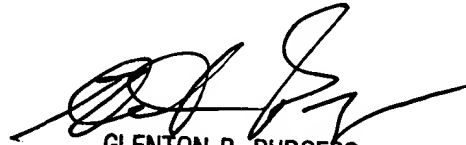
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marlon Johnson whose telephone number is (703) 305-4642.

The examiner can normally be reached on Monday to Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess, can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3230.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Marlon B. Johnson



GLENTON B. BURGESS
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